Patent Claims

1.Method for re-routing data packets of a packet-switching network (PN) onto at least one alternate network (AN1, ..., ANn) that assures a quality requested for these data packets, whereby the packet-switching network and the at least one alternate network form sub-networks of a communication network that is composed of at least one source node (U1, U2) and at least one destination node (Z) that are respectively connected to an access node (ZK1, ZK2) either directly or indirectly via at least one intermediate node, said access node being capable of setting up a connection both to the packet-switching network as well as to an alternate network, and between which (U1, U2, Z) data packets can be transmitted, characterized in that, for the re-routing of the data packets via an alternate network (AN1, ..., ANn) assuring the quality requested for these data packets, the appertaining data packets are identified in their source node only by a respective bit pattern known form such a re-routing to the access node (ZK1) that is connected to the source node either directly or indirectly via at least one intermediate node (ZW1); and in that, upon arrival of such data packets respectively identified by the appertaining bit pattern in the access node, a re-routing of the data packets identified with the known bit pattern onto an alternate network (AN1, ..., ANn) is initiated based only on the recognition of the appertaining bit pattern.

2. Method according to claim 1, characterized in that a filter in such an access node (ZK1, ZK2) checks the data packets arriving from a source node (U1, U2) for a bit pattern known to the access node (ZK1, ZK2) and, when a known bit pattern was recognized, initiates the re-routing of the data packets identified with this bit pattern onto an alternate network (AN1, ..., ANn).

3. Method according to claim 1, characterized in that the access node (ZK1, ZK2) connected to such a source node (U1, U2) either directly or indirectly via at least one intermediate node (ZW1, ZW2) contains a table for determining the traffic paths into which the function of the filter is integrated, in that it additionally contains the bit patterns that can produce a re-routing of a data packet identified with such a bit pattern onto an alternate network (AN1, ..., ANn).

4. Method according to one of the preceding claims, characterized in that such a bit pattern is located in a header of a data packet to be routed via an alternate network (AN1, ..., ANn).

5. Method according to one of the preceding claims, characterized in that the same bit pattern is employed by all source nodes (U1, U2) regardless of the respectively requested quality.

6. Method according to one of the claims 1 through 4, characterized in that the source nodes (U1, U2) employ bit patterns corresponding to the respectively requested quality.

7. Method according to claim 6, characterized in that each recognized bit pattern of a data packet produces a re-routing thereof onto an alternate network (AN1, ..., ANn) corresponding to the bit pattern with a specific quality.

8. Method according to claim 6, characterized in that each recognized bit pattern of a data packet produces a re-routing thereof onto an alternate network (AN1, ..., ANn) with a quality corresponding to the bit pattern.

9. Method according to one of the preceding claims, characterized in that, after recognition of such a bit pattern of a data packet to be routed via an alternate network (AN1, ..., ANn) in such an access node (ZK1, ZK2), the re-routing of the data packet onto an alternate network (AN1, ..., ANn) can be prevented when the alternate network (AN1, ..., ANn) cannot offer the quality corresponding to the bit pattern.

10. Method according to one of the preceding claims, characterized in that the source node that intends to send data packets communicates a message via the packet-switching network (PN) to its destination node (Z) with respect to the data packets to be routed via an alternate network (AN1, ..., ANn) and potentially waits for an acknowledge from the destination node (Z).

11. Method according to one of the preceding claims, characterized in that the access node (ZK1, ZK2) connected to such a source node (U1, U2) either directly or indirectly via at least one intermediate node (ZW1, ZW2) sends a message with respect to the assured quality requested by the source node (U1, U2) to the network node of such an alternate network (AN1, ..., ANn) and potentially waits for an acknowledge thereof.

12. Method according to one of the preceding claims, characterized in that it is applied to a network constellation wherein such an alternate network (AN1, ..., ANn) is formed in that at least one logical channel of the packet-switching network (PN) is reserved for the data packets to be transmitted with an assured quality.

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